

Remarks:

Claims 1-36 remain for consideration in this application, with claims 1, 10, 19, and 28 being in independent format. In response to the Restriction Requirement, Applicant provisionally elects group II which represents claims 10-18 drawn to an apparatus and traverses the restriction requirement with respect to group I which represents claims 1-9, and thereby also elects group I representing claims drawn to a process. Applicant has also added new claims 19-27, which are drawn to an apparatus specific to practicing the claimed process recited in claim 1, and new claims 28-36, which are drawn to a method of removal of entrained soot from syngas, according the specification. As the present invention is broadly directed towards a more efficient soot removal system, support for these new claims can be found throughout the specification, and specifically at page 1, lines 14-15, at page 2, lines 15-22, and at page 3, lines 3-4. Applicant has amended claim 10 to conform to the Jepson-style claim format according to 37 C.F.R. § 1.75(e). Claim 17 has also been amended as a matter of formality. In light of these amendments, in combination with the remarks hereunder, Applicant contends that the previous office action has been overcome.

All of the claims as they now stand relate to a system of soot removal from syngas produced from the partial oxidation of hydrocarbon-containing fuel, wherein the improvement is the use of a non-carbonaceous material that results in more efficient soot removal and consequently a more efficient heat exchange system. In light of this common, novel and unifying feature, Applicant respectfully requests that all claims be construed and examined as a single group.

In support of the traversal of the restriction, Applicant notes that the restriction requirement was based on the assumption that the claimed process and apparatus were distinct because the apparatus could be "used for another and materially different process [from the claimed process], such as a process for the purification of diesel exhaust gas." (Office action, page 2, ¶ 2). Applicant

respectfully disagrees with the assertion that the purification of diesel exhaust gas is a materially different process from the claimed invention. Diesel fuel is a prime example of a "hydrocarbon-containing fuel," and diesel exhaust (which results from incomplete combustion or partial oxidation of diesel fuel) similarly contains hydrocarbons. Because no system is 100% efficient, the combustion of diesel fuel always involves partial oxidation or incomplete combustion. This is a highly exothermic process. As explained in the specification, syngas is a common byproduct of the partial oxidation of any hydrocarbon-containing fuel (like diesel). The present invention, and in particular, the claimed apparatus is concerned with the removal of entrained solid carbon (i.e., soot) from this syngas (otherwise known as exhaust). It is well-known in the art that diesel is a carbon heavy fuel, and diesel exhaust contains a correspondingly increased amount of entrained carbon, which must be removed during the purification process. It necessarily follows then that the process of combusting diesel gas and subsequently purifying the exhaust involves the exothermic generation of syngas by the partial oxidation of a hydrocarbon-containing fuel, and the subsequent removal of soot from the syngas/exhaust. Therefore, the alleged process is not materially different from the claimed apparatus, and it cannot be shown that the present process and apparatus are distinct from each other as to require division.

Further, although the claimed invention requires more than one search class, Applicant contends that such a search would not be overly burdensome considering the sufficiently related subject matter, claim limitations and search classifications (classes 422 and 423).

Finally, under 37 CFR 1.142, Applicant is presenting claims at an early stage in prosecution in the hopes of preventing the necessitation of rejoinder and subsequent preparation of an

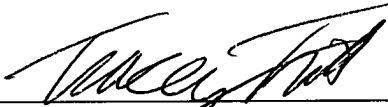
amendment under 37 CFR 1.121. Applicant asserts that the present claims would qualify for rejoinder and, therefore, requests examination of all claims at this time.

In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 19-0522.

Respectfully submitted,

HOVEY WILLIAMS LLP

By 

Tracey S. Truitt, Reg. No. 43,205
2405 Grand Boulevard, Suite 400
Kansas City, Missouri 64108
816/474-9050

ATTORNEYS FOR APPLICANTS

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